

ABSTRACT

A method for fabricating a transistor is disclosed. An example method forms a gate electrode on a semiconductor substrate, forms a first preliminary source/drain region and a pocket junction region through a first ion implantation process using the gate electrode as a mask, the pocket junction region being formed under the first preliminary source/drain region. The example method also forms a first oxide layer with uniform thickness on the substrate including the gate electrode, forms a nitride layer with uniform thickness on the first oxide layer, forms a second oxide layer over the nitride layer and forms spacers on sidewalls of the gate electrode. In addition, the example method forms a second preliminary source/drain region through a second ion implantation process using the spacers as a mask, removes the nitride layer and the first oxide layer on the surface of the substrate, and diffuses substantially all of the implanted ions in a horizontal direction of the substrate by performing a thermal treatment process for the resulting substrate.